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rocketfish™

900 Watt Power Supply

RF-900WPS

User Guide

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Rocketfish RF-900WPS 900 Watt Power Supply

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Introduction

Congratulations on your choice of this RF-900WPS power supply. Please read this manual carefully and follow the instructions before installing the power supply.

The RF-900WPS is an advanced power supply with excellent acoustic and thermal performance and intelligent thermal fan control technology that makes it virtually silent under 60% load. Five +12V rails deliver safer and more reliable output to your system. Active power factor correction circuits also reduce the power loss of the AC input line to less than 0.01%. The standby mode consumes less than 1W when +5VSB is less than 0.1A. This power supply series is certified by the 80 plus program.

Safety information

Warning: To reduce the risk of fire or electric shock, do not expose this device to rain or moisture.

	The lightning flash with arrowhead symbol, within an equilateral triangle is intended to alert the user to the presence of uninsulated dangerous voltage within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock.
	The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

Safety regulations

The power supply meets safety guidelines and regulations for UL, cUL, and FCC.

E181356(N)

E181356(C)

Important safety instructions

- Do not place your system near a radiator or other heat source.
- Do not place your system close to a source of strong magnetic fields.
- Do not place your system in a moist or dusty environment, or in an area subject to strong vibration.
- Do not place your system in direct sunlight.
- Your computer must operate at a stable AC input voltage.
- Your computer should not be situated directly next to a heater or another heat source.

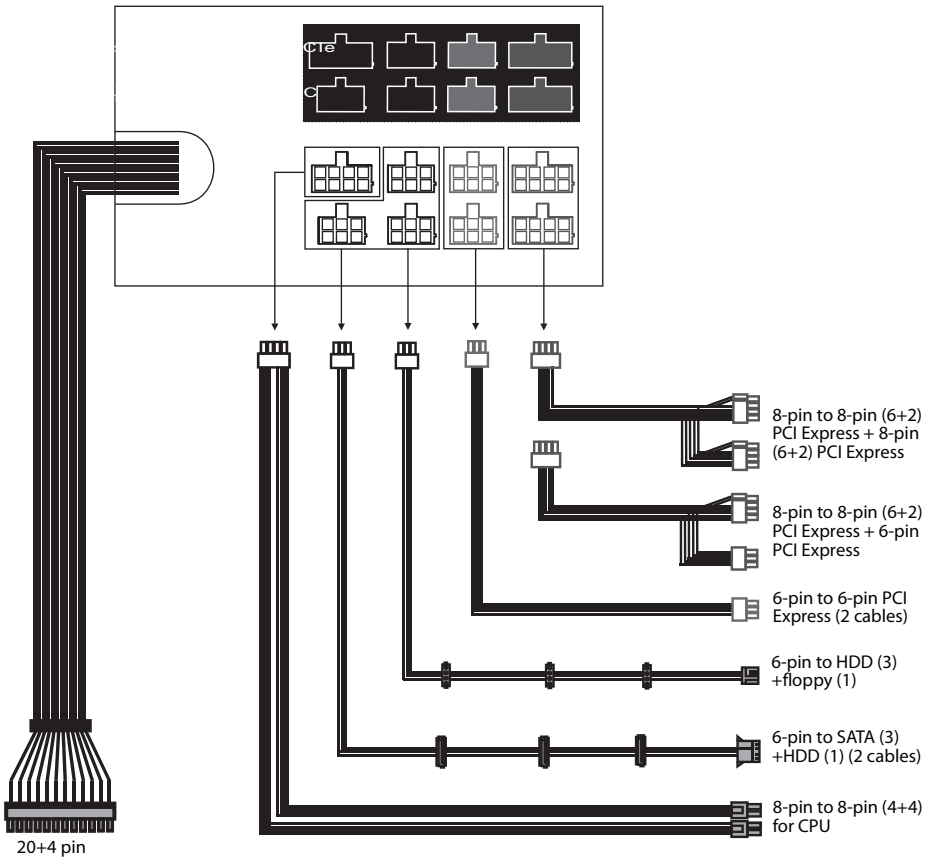
- Do not open the cover on the power supply case. Dangerous voltages are present inside the cover. Your warranty is void if the cover is removed.
- Never operate the device with wet or moist hands.
- Never place items in the openings or fan of the power supply.
- Make sure that the power cord is plugged into a powered electrical outlet.
- Make sure that the power cord is plugged into the power supply.
- Make sure that you connect your power supply properly. Check your motherboard and graphic card manuals for compatibility before connecting the power supply to any of your devices.

***Note**: If the power supply does not work correctly, contact our service center immediately.*

Features

- Cable management design
- Complies with Intel ATX12V V2.3 and EPS12V V2.92
- Certified by 80 PLUS® Silver
- Active PFC (PF>0.99)
- Extremely silent, with Intelligent Fan technology
- Supports SLI Multi-GPU VGA card
- Supports Intel and AMD duo- and multi-core CPUs
- Hairline electronic plating
- Accurate voltage regulation (±3%) provides stable voltage for your system
- Standby mode consumes less than 1W when +5VSB is less than 0.1A
- Five +12V rails provides superior performance
- Advanced phase-shifting control full bridge for high reliability and efficiency
- Multiple protection functions, including OCP, OVP, UVP, OPP, and SCP

Cable connections


8-pin to 8-pin (6+2) PCI Express + 8-pin (6+2) PCI Express
8-pin to 8-pin (6+2) PCI Express + 6-pin PCI Express
6-pin to 6-pin PCI Express (2 cables)
6-pin to HDD (3) +floppy (1)
6-pin to SATA (3) +HDD (1) (2 cables)
8-pin to 8-pin (4+4) for CPU
20+4 pin

Installing your power supply

To make sure you connect your power supply correctly, check your motherboard and graphics card manuals for compatibility before connecting the RF-900WPS to any of your devices.

***Notice**: Cable management*

This product uses color-coded sockets and cables for ease of use. Connect the plugs to only those sockets with the same color ends. Red and blue sockets are to be used for PCIe cables only. Black sockets are to be used for all other connections.

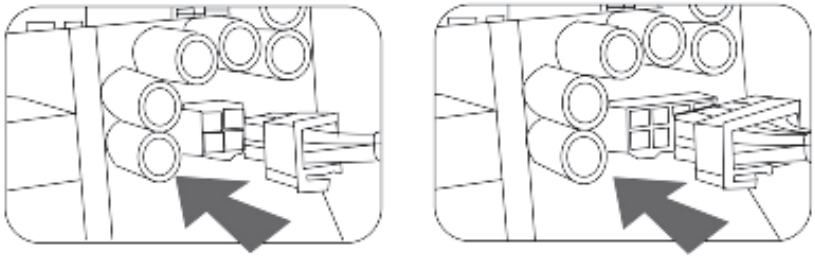
***Warning**: Failure to follow these instructions may result in damage to your computer components.*

To install your power supply:

1. Check your local AC voltage before installation (115 VAC voltage is for USA, Japan, and several others, and 230 VAC voltage is for Europe, Southeast Asia, and many other countries).

   ***Caution**: Make sure that you connect the power supply to local input AC voltage only. Setting the incorrect voltage can damage the power supply and connected equipment and may void your warranty. The RF-900WPS is compatible with 115 VAC and 230 VAC input voltage.*
2. Turn off your computer, then unplug the power cord from your old power supply.
3. Open your computer case following the directions provided in your case manual.
4. Disconnect all power supply connectors from the motherboard and peripheral devices such as case fans, hard drives, floppy drives and DVD and CD drives.
5. Remove the old power supply from your computer case and install your new Rocketfish power supply.
6. Connect the 20+4-pin main power connector to your motherboard.

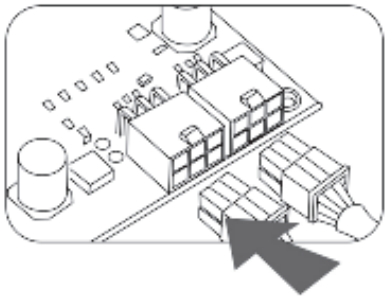
7 Connect the 8-pin (4+4) or 4-pin +12 V power connectors to your motherboard.



8 Connect the Serial ATA (SATA) connectors to the peripheral devices.

9 Connect the peripheral 4-pin power connectors if you are still using an IDE connector for hard drives or an optical drive.

10 Connect the 6-pin +12 V PCIe connector to your PCI Express graphics cards, as needed.



11 Connect your case fans to the regular 4-pin peripheral connectors if you are using these fans.

***Caution**: Make sure that all connectors are securely connected. Incorrect connections could prevent your computer from starting and could damage some components.*

12 Close your computer case and connect the AC power cord to the power supply.

Starting your computer

To start your computer:

- Turn on your computer by pressing the power button on the front of your computer.

Troubleshooting

If the power supply fails to function properly, check the following before returning it for repair:

- Make sure that the power cord is plugged correctly into an AC power outlet and into the power supply.
- Make sure that all power connectors are properly connected to all components.

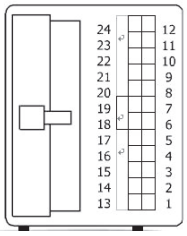
Specifications

Input voltage	Minimum: 90 V Normal: 100 V ~ 240 V Maximum: 265 V		
Input frequency	Minimum: 47 Hz Maximum: 63 Hz		
Overcurrent protection	Input fuse		
Active PFC	Power factor: equal to or greater than 0.99 @230 V/50 Hz full load		
Output	+3.3V	Maximum load 24.0 A	Minimum load 0.8 A
	+5 V	Maximum load 30.0 A	Minimum load 0.5 A
	+12 V1	Maximum load 16.0 A	Minimum load 0.0 A
	+12 V2	Maximum load16.0 A	Minimum load 0.0 A
	+12 V3	Maximum load16.0 A	Minimum load 0.9 A
	+12 V4	Maximum load 18.0 A	Minimum load 0.1 A
	+12 V5	Maximum load 18.0 A	Minimum load 0.0 A
	-12 V	Maximum load 0.5 A	Minimum load 0.0 A
	+5 VSB	Maximum load 3.0 A	Minimum load 0.1 A
	Note: +3.3 V and +5 V total output not to exceed 170 W +12 V1, 2, 3, 4, and 5 combined output not to exceed 72 A		
Rated wattage	900 W		
Peak wattage	1000 W		

Efficiency	85% (minimum) at full load 88% at typical load 85% at light load	
Standby	<1 W when +5 VSB <0.1 A @115 V/60 Hz	
Output ripple and noise	+3.3 V +5 V +12 V 1, 2, 3, 4, 5 -12 V +5 VSB	50 mV p-p 50 mV p-p 120 mV p-p 120 mV p-p 50 mV p-p
Output protection	Yes	
Over voltage protection	Yes	
Short circuit protection	Yes	
Over current protection	Yes	
Hi-Pot (the power supply is capable of withstanding)	Input to ground voltage: Test time: Cutoff current (maximum):	1500 VAC 3.0 S 10 mA
Leakage current	1.75 mA maximum (at 230 Vrms, 50 Hz)	
Grounding resistance	100 mOhm maximum at 25 A	
Environmental		
Operating temperature	32°F to 122°F (0°C to 50°C)	
Storage temperature	-40°F to 131°F (-40°C to 55°C)	
Operating humidity (non-condensing)	5% to 95% RH	
Vibration (non-operating)	Swing: 0.35 mm Frequency: 10-55-10 Hz Degree: 5 times per axis, 30 minutes, log sweep p-p Acceleration: 19.98 m/s^2 @ a frequency of 55 Hz	
Safety compliance	IEC60950-1, EN60950-1, UL60950-1, and GB4943	
Safety approval	UL, C-UL, and FCC	

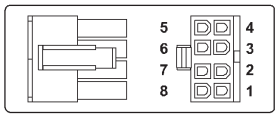
Appendix

Main power connector



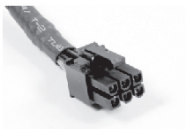
Voltage	Color	Pin	Pin	Color	Voltage
Com	Black	24	12	Orange	+3.3 V
+5V	Red	23	11	Yellow	+12 DC
+5 V	Red	22	10	Yellow	+12 DC
+5 V	Red	21	9	Purple	+5 Vsb
N/C	N/C	20	8	Gray	PWR_ON
Com	Black	19	7	Black	Com
Com	Black	18	6	Red	+5 V
Com	Black	17	5	Black	Com
PS_ON	Green	16	4	Red	+5 V
Com	Black	15	3	Black	Com
-12 V	Blue	14	2	Orange	+3.3 V
+3.3 V	Orange	13	1	Orange	+3.3 V

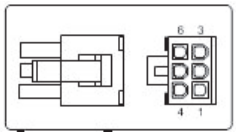
+12 V connector 8 (4+4)-pin



Color	Signal	Pin
Black	Com	1
Black	Com	2
Black	Com	3
Black	Com	4
Yellow/Black	+12 VDC	5
Yellow/Black	+12 VDC	6
Yellow/Black	+12 VDC	7
Yellow/Black	+12 VDC	8

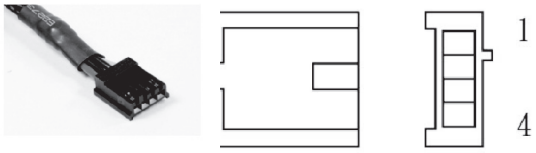
PCI Express connector





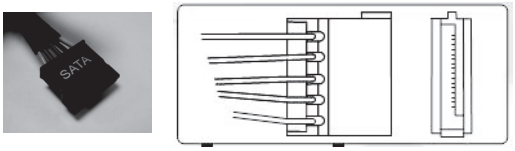
Color	Signal	Pin
Yellow	+12 VDC	1
Yellow	+12 VDC	2
Yellow	+12 VDC	3
Black	Com	4
Black	Com	5
Black	Com	6

Floppy drive connector



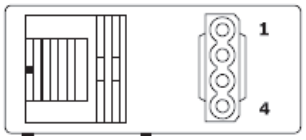
Color	Signal	Pin
Red	+5 VDC	1
Black	Com	2
Black	Com	3
Yellow	+12 VDC	4

SATA power connector



Color	Signal	Pin
Yellow	+12 VDC	1
Black	Com	2
Red	+5 VDC	3
Black	Com	4
Orange	+3.3 VDC	5

Peripheral connector



Color	Signal	Pin
Yellow	+12 VDC	1
Black	Com	2
Black	Com	3
Red	+5 VDC	4

Legal notices

FCC Part 15

This device complies with Part 15 of the FCC Rules. Operation of this product is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

This equipment has been tested and found to comply within the limits for a class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.

- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced technician for help.

FCC warning

Changes or modifications not expressly approved by the party responsible for compliance with the FCC Rules could void the user's authority to operate this equipment.

Canada ICES-003 statement

This Class B digital apparatus complies with Canadian ICES-003.

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For service and support call 1-800-620-2790.

One-year limited warranty

Rocketfish Products ("Rocketfish") warrants to you, the original purchaser of this new **RF-900WPS** ("Product"), that the Product shall be free of defects in the original manufacture of the material or workmanship for one (1) year from the purchase of the Product ("Warranty Period"). This Product must be purchased from an authorized dealer of Rocketfish brand products and packaged with this warranty statement. This warranty does not cover refurbished Product. If you notify Rocketfish during the Warranty Period of a defect covered by this warranty that requires service, terms of this warranty apply.

How long does the coverage last?

The Warranty Period lasts for one year (365 days), beginning on the date you purchased the Product. The purchase date is printed on the receipt you received with the product.

What does this warranty cover?

During the Warranty Period, if the original manufacture of the material or workmanship of the Product is determined to be defective by an authorized Rocketfish repair center or store personnel, Rocketfish will (at its sole option): (1) repair the Product with new or rebuilt parts; or (2) replace the Product at no charge with new or rebuilt comparable products or parts. Products and parts replaced under this warranty become the property of Rocketfish and are not returned to you. If service of Products and parts are required after the Warranty Period expires, you must pay all labor and parts charges. This warranty lasts as long as you own your Rocketfish Product during the Warranty Period. Warranty coverage terminates if you sell or otherwise transfer the Product.

How to obtain warranty service?

If you purchased the Product at a retail store location, take your original receipt and the Product to the store you purchased it from. Make sure that you place the Product in its original packaging or packaging that provides the same amount of protection as the original packaging. If you purchased the Product from an online web site, mail your original receipt and the Product to the address listed on the web site. Make sure that you put the Product in its original packaging or packaging that provides the same amount of protection as the original packaging.

Where is the warranty valid?

This warranty is valid only to the original purchaser of the Product in the United States, Canada, and Mexico.

What does the warranty not cover?

This warranty does not cover:

- Customer instruction
- Installation
- Set up adjustments
- Cosmetic damage

- Damage due to acts of God, such as lightning strikes
- Accident
- Misuse
- Abuse
- Negligence
- Commercial use
- Modification of any part of the Product, including the antenna

This warranty also does not cover:

- Damage due to incorrect operation or maintenance
- Connection to an incorrect voltage supply
- Attempted repair by anyone other than a facility authorized by Rocketfish to service the Product
- Products sold as is or with all faults
- Consumables, such as fuses or batteries
- Products where the factory applied serial number has been altered or removed

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Contact Rocketfish:

For customer service, please call 1-800-620-2790.
www.rocketfishproducts.com

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